ABSTRACT OF THE INVENTION

[00043] Concurrent program analysis is fashioned for detecting potential race conditions such as data races in computer programs. One feature of this analysis is verifying annotations of addressable resources in a program. Annotations are verified by checking if thread-local resources are indeed thread-local, and that thread-shared data spaces are not in fact thread-local. Another feature is detecting potential race conditions, such as data races, in the computer program. The computer program can spawn a plurality of threads that are capable of being executed concurrently. The source code of the computer program being analyzed includes an element annotated as either thread-local or thread-shared. The validity of the thread-local annotation is verified if the element is annotated in the computer program as thread-local, wherein an invalid thread-local annotation may cause a race condition.